

**REMARKS**

The applicants thank the Examiner for the thorough examination of the application. No new matter is believed to be added to the application by this amendment.

**Status Of The Claims**

Claims 1 and 3-13 are pending in the application. Claim 2 is cancelled. The amendments to claim 1 find support at page 13, lines 18-20 of the specification. Claim 3 corresponds to cancelled claim 2 written in independent form. Claims 4-6 find support at page 15, lines 11-17 of the specification. Claims 7-9 find support at page 15, line 18 to page 16, line 1 of the specification. Claims 10-13 find support at page 16, lines 18-19 of the specification.

**Rejection Over Lyu '711**

Claims 1 and 2 are rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-17 of Lyu '711 (U.S. Patent 6,623,711). Applicants respectfully traverse.

Claim 1 of Lyu '711 sets forth:

1. A siloxane-based resin prepared by hydrolyzing and polycondensing a cyclic siloxane compound of formula (1) and a cage-shape siloxane compound of any of formulas (2a) through (2c), optionally with at least one silane compound, in an organic solvent in the presence of a catalyst and water, wherein the silane compound is substituted at Si with at least one hydrolysable group . . .

In contrast, instant claim 1 of the invention claims:

1. A siloxane-based resin prepared by hydrolyzing and polycondensing a cyclic siloxane compound of formula (1), together with a silane compound of formula (3) or by hydrolyzing and polycondensing the cyclic siloxane compound of formula (1) together with the silane compound of formula (3) and a silane compound of formula (4), in an organic solvent in the presence of a catalyst and water . . .

Therefore, claim 1 of the invention clearly sets forth components that are not present in claim 1 of Lyu '711. As a result, the present invention of claim 1 is patentably distinct over claim 1 of Lyu '711.

Also, claim 2 was acknowledged to be patentable (paragraph 5 of the Office Action) but rejected as being dependent upon a rejected base claim. Claim 2 has been rewritten as independent claim 3.

This rejection is overcome and withdrawal thereof is respectfully requested.

### **Rejection Over Lyu '822**

Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-14 of Lyu '822 (U.S. Patent 6,660,822). Applicants respectfully traverse.

Claim 1 of Lyu '822 sets forth:

1. A method for forming insulating film between interconnect layers in microelectronic devices, said method comprising: preparing siloxane-based resins by hydrolyzing and polycondensing the compound represented by the following formula (1), with the compound represented by the following formula (2), in an organic solvent in the presence of a catalyst and water; coating a silicon substrate with the siloxane-based resins dissolved in an organic solvent; and heat-curing the resulting coating film . . .

In contrast, instant claim 1 of the invention claims:

1. A siloxane-based resin prepared by hydrolyzing and polycondensing a cyclic siloxane compound of formula (1), together with a silane compound of formula (3) or by hydrolyzing and polycondensing the cyclic siloxane compound of formula (1) together with the silane compound of formula (3) and a silane compound of formula (4), in an organic solvent in the presence of a catalyst and water . . .

Therefore, claim 1 of the invention clearly sets forth components that are not present in claim 1 of Lyu '822. As a result, the present invention of claim 1 is patentably distinct over claim 1 of Lyu '822.

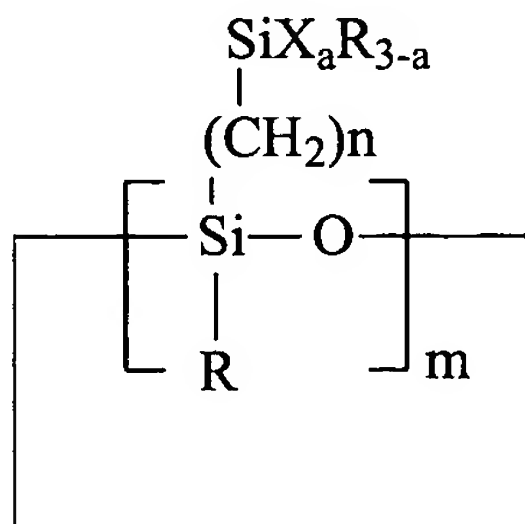
Also, claim 2 was acknowledged to be patentable (paragraph 5 of the Office Action) but rejected as being dependent upon a rejected base claim. Claim 2 has been rewritten as independent claim 3.

This rejection is overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §102(b) Over Jentsch**

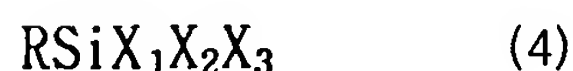
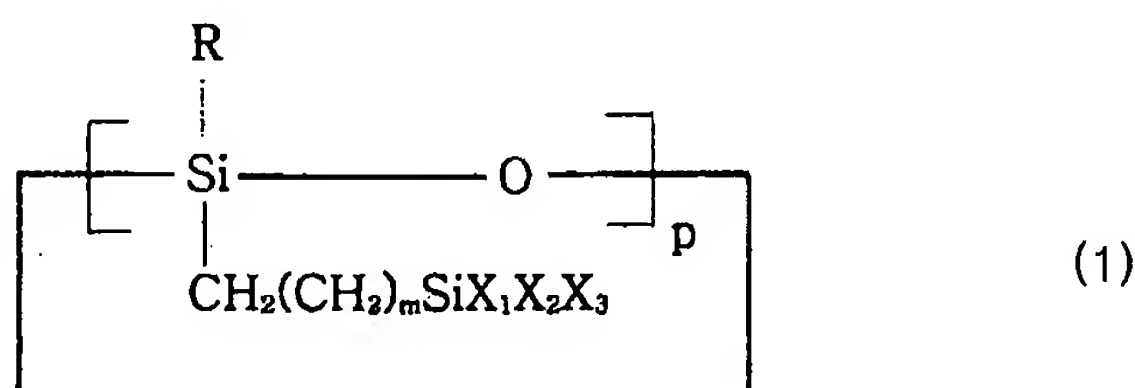
Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Jentsch (U.S. Patent 6,005,131). Applicants respectfully traverse.

Jentsch at column 2 discusses cyclic organosilanes of the formula (I):



Jentsch at column 10, lines 61-64 discusses a reaction of a cyclic hybrid material with tetraethylorthosilicate.

In contrast, claim 1 of the present invention recites reacting a compound of the formula 1 with compounds of the formula (3) or (3) and (4).



where R and X<sub>1</sub> to X<sub>4</sub> are defined to cover formulations that are clearly not disclosed by Jentsch.

Jentsch therefore fails to anticipate the invention of claim 1. This rejection is overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §102(b) Over Michalczyk**

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Michalczyk (U.S. Patent 5,378,790). Applicants respectfully traverse.

Michalczyk pertains to single component inorganic/organic network materials. Michalczyk in Table 1 (columns 10-12) discusses star-gel precursors, which can typically be a ring containing five Si-O components.

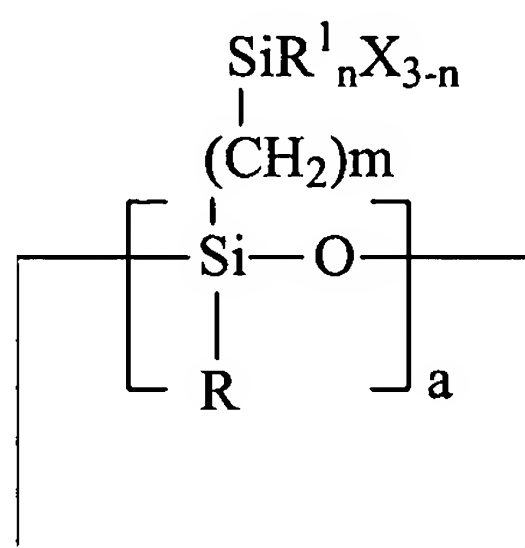
Michalczyk clearly fails to disclose or suggest a polysiloxane polymer, such as is set forth in claim 1 of the invention (*see also* the polymer molecular weights of claims 10-13). That is, the star-gel precursors of Michalczyk are non-polymeric materials that are used to form gels. Michalczyk therefore clearly fails to disclose the polymeric resin of claim 1 of the present invention.

This rejection is overcome and withdrawal thereof is respectfully requested.

**Rejection Under 35 U.S.C. §102(e) Over Mechtel**

Claim 1 is rejected under 35 U.S.C. §102(e) as being anticipated by Mechtel (U.S. Patent 6,413,446). Applicants respectfully traverse.

Mechtels pertains to antifouling compositions typified by formula (III) in column 3:



Mechtels fails to disclose the resin of independent claim 1 of the present invention where claim 1 of the present invention recites reacting a compound of

the formula 1 with compounds of the formula (3) or (3) and (4). Mechtel therefore fails to anticipate the invention of claim 1.

This rejection is overcome and withdrawal thereof is respectfully requested.

### **Information Disclosure Statement**

The Examiner is thanked for considering the Information Disclosure Statement filed July 18, 2003 and for making the initialed PTO-1449 form of record in the application in the Office Action mailed September 10, 2004.

### **Conclusion**

The Examiner's rejections have been overcome, obviated or rendered moot. No issues remain. The Examiner is accordingly respectfully requested to allow the application.

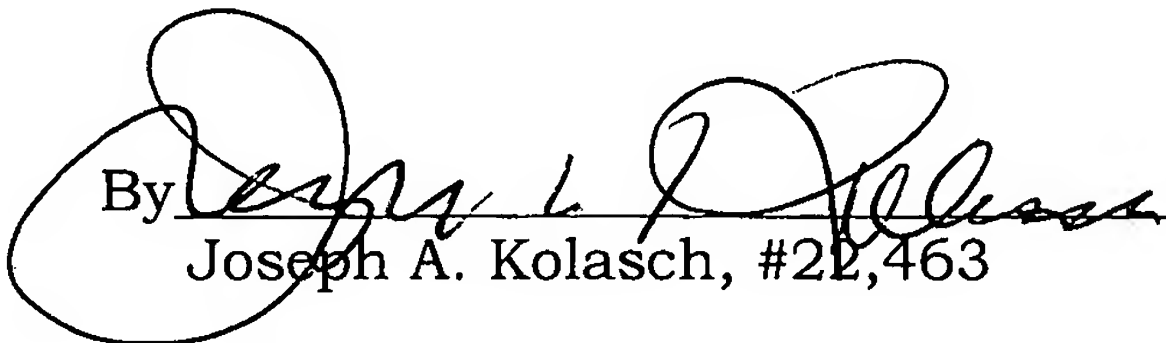
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert E. Goozner, Ph.D. (Reg. No. 42,593) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.


Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee of \$120.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By   
Joseph A. Kolasch, #22,463

  
JAK/REG/jls  
3811-0122P

P.O. Box 747  
Falls Church, VA 22040-0747  
(703) 205-8000

Attachment(s):